Researchers Report New Findings of Animal-Ethanol Experiments at International Meeting in Helsinki

Specialists from 12 countries presented the results of their research on the biological aspects of alcohol consumption at an international symposium held at Helsinki, Finland, September 27-29, 1971. The meeting was organized by the Finnish Foundation for Alcohol Studies in collaboration with the Physiological Laboratory of the State Alcohol Monopoly. Following are brief reports of some of the papers presented.

**Bruun Calls for Studies of Societal Control System**

Studies concerned with the total societal control system of alcohol and alcoholics are more necessary today than works concerned with the individual traits of deviant drinkers or the causes of drinking, asserted Dr. Kettil Bruun, Resident Director of the Finnish Foundation for Alcohol Studies. His remarks were contained in the Jellinek Memorial Lecture given in Berlin in June 1971.

Dr. Bruun cited as an example of a pertinent study one presently in the pilot stages in Finland that is estimating the burden that alcohol imposes upon public health services in the entire country. Research is needed on the many agencies that attempt to exercise an influence on drinking—those that profit from the sale of alcohol (the brewery industry, restaurants, stores); those that attempt to control its use (temperance groups, the Finnish State Alcohol Monopoly and the Ministry of Finance); and various treatment and public agencies (AA, the police, courts, hospitals, etc.). Their conflicting views are seldom taken into account in forming a total picture of alcohol use in a society.

Dr. Bruun called for eventual international control policy regarding alcohol. The lecture has been published in full by International Council on Alcohol and the Addictions.

**Chronic Ethanol Use in Mice Decreases Brain Protein Synthesis**

Dr. Ernest F. Noble and Sujata Tewari of the University of California at Irvine had previously shown by in vitro experiments that a significant aberration of brain protein synthesis occurs in C57BL/6J mice after 10 days exposure to alcohol.

At the conference they presented new data. The authors examined leucine, an amino acid to be incorporated into protein; and 5-3H orotic acid a precursor of RNA, to examine RNA metabolism. Making injections either intraperitoneally or by intraventricular route, all the subcellular brain components of the alcohol-inesting mice (with the exception of the mitochondrial fraction) showed a decreased ability to incorporate 1-14C leucine into protein. All the fractions studied showed a decreased specific activity of isolated RNA. When alcohol-treated mice were allowed to abstain from alcohol, some recovery in the protein synthesizing system was noted.

The authors concluded that it is not unreasonable to postulate that long-term ingestion of a toxic substance such as alcohol could lead to brain dysfunction by adversely affecting vital macro-molecules involved in maintaining structural integrity and metabolic functions. Their experiments correlate with those of Freund who, using the same strain of mice, observed that chronic ethanol ingestion for three months resulted in impairment of associative processes of learning in the central nervous system, and they also correlate with measures in humans which show increasing deficits of abstracting and adaptive abilities correlated with the length of alcohol ingestion.

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ICAA Conference at Dublin Stresses Total Effort by Community and Professions

Total involvement by government, the professions, and the community as a whole in prevention, treatment, and rehabilitation was stressed by the speakers at the International Conference on Alcoholism and Addiction held at Dublin, Ireland, October 5-8, 1971. The conference was organized jointly by the Irish National Council on Alcoholism and the International Council on Alcohol and Addictions.

In opening the conference, Erskine Childers, T.D., Minister of Health for Ireland, noted that plans are underway for in-depth studies of the personality of the Irishman who is prone to overindulgence in alcohol. These studies should be extended to include those of Irish ancestry who live in other countries, he said. Further reports from the conference follow.

**Drinking Among Irish Young People**

The drinking habits and attitudes of Irish young people reflect the general cultural ambivalence toward alcohol, said Joyce Fitzpatrick, Department of Social Science, University College, Dublin. She conducted a survey of drinking habits among 18-20-year-olds in a Dublin suburb and found that although the majority had taken the "pledge" (a Confirmation Pledge taken by Roman Catholic children not to drink until the age of 20), by the age of 17 most of the males had taken a drink, and by the age of 19, most of the females had joined them. At least one parent of the majority of the young people surveyed drank, although they reported unfavorable attitudes toward alcohol. Most of the young people saw drinking as a normal part of adult life.

Miss Fitzpatrick described an Anglo-Irish research project that intends to compare the attitudes and patterns of drinking of young people in both countries.

**Alcohol and Road Accidents in Ireland**

A retrospective study of driving histories of 100 patients being treated for alcoholism and 80 controls was reported by D. J. Cooney and A. J. Clair of St. Patrick's Hospital, Dublin. Alcoholics had 4 times as many prosecutions and twice as many accidents as the controls. In 130 of the 163 accidents in the alcoholic

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EDITORIAL

Prevention and Education:
Major Goals of NIAAA

This Guest Editorial was written by
Morris E. Chafetz, M.D., Director,
National Institute on Alcohol Abuse
and Alcoholism.

The year nineteen hundred and seventy-one marks a new day for the alcoholic population of the United States and their families. When the "Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act" was signed into law on the last day of 1970, the nation formally recognized that alcoholism is an illness, and established programs to treat and control it.

This is also a new day for alcohol education. We have a mandate and an unparalleled opportunity to mount innovative programs of information and education in this health area. One of the Institute's major priorities is to prevent alcohol problems through programs of education in the broadest sense, including both the didactic and the experimental. Since the time of Repeal, the nation has given lip service to the need for alcohol education in the schools, but by and large, enlightened approaches or programs with any impact have been few and meagre.

Through a national information and education program, and through the function of the Institute's Division of Prevention, the day of "telling it like it is" about alcohol and about alcohol problems has arrived. We must begin to erase the mysteries and misunderstandings about alcohol and replace them with knowledge and awareness that can ultimately lead to a reduction in the human and economic wastes caused by alcohol problems today.

The challenge before us is to devise ways of using education to change long-held attitudes and deeply-entrenched behavior with respect to alcohol use. We must, for example, create programs which will eliminate "getting bombed" as the end goal of much of the drinking in our nation. We must also take a hard stand against intoxication by making people aware that drinking is one phenomenon and drunkenness is another. Further, we must reduce the high status afforded in our society to the man who can "hold his liquor," and instead enhance the stature of the man who "knows his liquor." Still another attitude that must be changed is our tendency to disapprove of drunk driving in general, while accepting our own driving after drinking beyond a safe level.

We are also going in other significant and admittedly difficult directions in our total prevention effort, including efforts to achieve changes in liquor advertising to promote responsible drinking by those who drink. We will also work with appropriate officials to lower the Federal proof requirement on alcoholic beverages. Further, we hope to reorient the purpose of bars in this country, to take away their sole emphasis on drinking. Another thrust will be directed towards encouraging those who purvey alcoholic beverages to have a responsibility to the individual to whom they make liquor available.

Ultimately, our prevention program will not be exclusively an alcoholism endeavor. For too long we have singled out alcohol for special attention, with negative consequences. What we must now do is to build a total system, a multi-educational program, that develops social responsibility with respect to many health and social issues.

It is time we faced the world as it is and created programs of education and prevention based on reality. In developing the broadest possible programs, we are willing to listen to, consider, and test any technique or mechanism which will help us turn around the pitiful status of our nation today with respect to its understanding of alcohol issues.

Noted Scientist Appointed to NIAAA
National Advisory Council

Britton Chance, Ph.D., Professor and Chairman of the Department of Biophysics and Physical Biochemistry at the University of Pennsylvania School of Medicine, has been appointed to the National Advisory Council on Alcohol Abuse.

Dr. Chance is also Director of the Johnson Research Foundation at the University of Pennsylvania. He has held both posts since 1949. Since 1964, he has been E. R. Johnson Professor of the University of Pennsylvania.

AMSA Holds Annual Meeting in Baltimore

The multidisciplinary treatment of alcoholism and the changing role of the physician and the allied health professionals was the theme of the 2nd Annual Meeting of the American Medical Society on Alcoholism held in Baltimore October 29-30, 1971.

The well-attended meeting heard the opening address by Irvin E. Hendryson, M.D., President of NCA.

Papers were presented by, among others, Wallace Mandell of Johns Hopkins Hospital on treatment results in alcoholism, and at a luncheon meeting Dr. Samuel C. Asper, Chief of Medicine of Johns Hopkins Hospital, spoke.

In addition to many other papers, several workshops and field trips were part of the program.

At the business meeting of the AMSA, the proposed affiliation with NCA was approved by a vote of over 200 to 9. Further negotiations are underway to clarify technical differences in the agreements accepted by each organization.

Marijuana and Alcohol Use Increasing among Young

The prevalence of marijuana is increasing, not decreasing, the use of alcohol. Joan Haskin, a Health and Family Life Education teacher in San Francisco, told a meeting at the San Francisco State College Faculty Program Center in May 1971. A teen-ager's first drug experience is almost always with alcohol; marijuana is the drug of choice and it is most frequently used with wine. Her conclusions were drawn from various surveys and her own survey of 2,000 10th-grade students over three years.

BOOK REVIEW

Practical Alcoholism Programming:
An Honorable Approach to Man's Alcoholism Problem.


Those who are in other fields will find this comprehensive book useful in familiarizing themselves with organizations, treatment and educational requirements, methodology, and the current governmental structure having to do with alcoholism.

It omits comment on the American Medical Society on Alcoholism and the new direction of the Medical Affairs Department of NCA.

This book is a companion volume to the author's Alcoholism: Treatable Illness (1968).
Brain 5HT Content Marks Alcohol-Preferring Rats

Dr. L. Ahtee of the State Alcohol Monopoly of Finland, using the outbred rat strains developed by Kallervo Erickson in the same laboratory, reported on the effect of ethanol on the brain 5 hydroxytryptophane content of rat strains selected for their alcohol preference. The animals were decapitated, and the whole brain except the cerebellum analyzed for 5 hydroxytryptophane. In animals that had never been exposed to ethanol, the alcohol preferring strain showed a 15% larger concentration of 5 hydroxytryptophane, suggestive but not significant. However, after the two strains were exposed to the same amounts of ethanol, mean concentration of 5 hydroxytryptophane differed significantly and progressively. After four months a 30% difference in 5 hydroxytryptophane was found.

Alterations of Brain Serotonin Metabolism Profoundly Shift Alcohol Preference

R. D. Myers of Purdue University's Laboratory of Neuropsychology reviewed his experiments which had demonstrated that the continual presence of a tiny volume of ethyl alcohol within the fluid of the cerebral ventricles of rats evoked a dramatic increase in preference for alcohol in direct relationship to the concentration of the infusate. The amount of alcohol in the ventricles was so small that other bodily organs were not affected. The sharp increase in alcohol consumption produced obviously intoxicated rats. The experiments were extended to acetaldehyde and paraldehyde with similar results, and when rhesus monkeys were used, 50% of those whose ventricles were perfused with 100 microliters every 15 minutes around the clock, drank sufficient ethanol so that they were unable to maintain their posture in the restraining chair.

Several experiments to demonstrate the role of shifts in serotonin metabolism on this phenomenon were made. Parachlorophenylalanine, a tryptophane hydroxylase inhibitor which depletes cerebral serotonin, was given orally to rats prepared for preference/aversion as described above. The intake of ethanol fell significantly below the baseline preference during treatment, and was suppressed for one month afterwards. If a decline of ethanol intake should in fact be caused by the deletion of cerebral serotonin, increased serotonin levels could have the opposite effect and evoke a preference for alcohol. However, systemic administration of 5-hydroxytryptophane, the normal precursor of serotonin, suppressed intake of alcohol just as pCPA had. The effects were even more permanent, and lasted during the entire four-month selection period, despite rapid return of cerebral content of 5HTP to a normal level. Utilizing 5HTP by the intracranial route proved just as effective in lowering ethanol preference as in the systemic route. 5-hydroxytryptophane, an important metabolite of serotonin, caused a 25% increase in ethanol preference.

These studies led to the conclusion that "it is essential to determine what part the catecholamines in the brain stem may play in the phenomenon of ethanol addiction."

A New Morphine-like Condensation Product

A third morphine-like condensation product of alcohol and biogenic amines has been postulated and found by Dr. R. Dajani of the University of Beirut, Lebanon. This is added to the previous discoveries of Harris and Cohen. A beta carboline derivative, it is formed by the condensation of serotonin with acetaldehyde, has an absorption spectrum of U.V. 273 millimicrons, and when formed from brain homogenates with added serotonin and acetaldehyde results in three spots in thin layer chromatography at 259, 265, and 278 millimicrons.

Hungry Executive Rats Prefer Alcohol

Rats deprived of food drank high concentrations and large quantities of ethanol, reported Richard A. Miesch and Travis Thompson of the University of Minnesota Medical School. Rats trained to press a lever for presentations of ethanol or water control pressed the levers more for the ethanol than for the water. As the concentration of ethanol was increased, both the rate and the quantity consumed also increased.

Cross-Breeding Advocated in Psychogenetic Analysis

Distinguishing quantitative variation in behavior according to its heritable and environmental determinants is a problem that has not yet been solved; asserted P. L. Broadhurst of the Department of Psychology, University of Birmingham (England). The use of selective breeding, he noted, creates considerable problems and tends to obscure the need for more precise specifications of the nature of gene action governing behavioral differences. Methods involving cross-breeding, especially of inbred strains of laboratory animals, are probably superior.

Emotional Mice Shun Alcohol

Does a more emotional person have a greater chance of developing alcoholism? Not if they resemble the mice developed by Clydale Whitney of the psychology department, Florida State University, Tallahassee, Fla. When bred for emotionality and tested for alcohol preference, he surprisingly found that the more

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emotional strain (measured by the recognized measure of open field defecation and urination) avoided alcohol in comparison to a preference shown by the more phlegmatic strain. These differences became apparent in the genetically segregating F2 generation.

Ethanol Metabolism in Alcoholics

No specific, intrinsic, or genetically determined metabolic factor has been discovered to account for the complex process of alcoholism in man, said Jack H. Mendelson, M.D., Director of the Department of Psychiatry of Boston City Hospital. Prolonged alcohol consumption may result in an induced enhancement of ethanol catabolism in some alcoholics; however, this phenomena alone cannot explain behavioral tolerance for alcohol. No differences have been discovered in metabolism of alcohol between alcoholic and nonalcoholic individuals when they have abstained from drinking for three or more weeks. The most significant factor affecting rate of ethanol metabolism in alcoholics is adequacy of dietary intake. Alcoholics may learn to abstain from eating to pursue a greater dose response effect from alcohol intake.

New Drug Reverses EEG Effects of Alcohol

A new drug, pyrithioxine (Encephabol) developed by the E. Merck Co. of Germany, was tested by Leonide Goldstein of the N. J. Neuropsychiatric Institute, Princeton, N.J. using EEG measures of ethanol effects. In rabbits, the effects of ethanol could be entirely prevented by pyrithioxine, while they were only partially blocked by amphetamine. Pyrithioxine did not block the sedative effects of pentobarbital. In cats, pyrithioxine blocked and/or prevented the effects of ethanol even with comi-inducing doses. Analysis of EEG effects of ethanol disclosed repeatedly that the onset of the effect occurred first at the reticular formation, and was detectable in the hippocampus before spreading to the cortex. In cats, the limbic system was more affected than the reticular formation.

Other Reports

- Animals apparently do not like ethanol for its taste, since rats whose oral mucous membranes had been anesthetized increased preference for 5% ethanol solution over pure water, reported R. J. Royer of the Universite de Nancy (France). 
- The half-sib research reported at the NCA Annual Meeting (PAN, Vol. 6, No. 2) has been expanded to 150 subjects, according to Mare A. Shuekt, M.D., Department of Psychiatry, University of California, La Jolla, and the results support the earlier findings of a genetic influence on alcoholism. The time patterns of changes in rats given ethanol were distinctly different from the changes induced by chronic barbital treatments, said Gran Wahlstrom of Uppsala, Sweden.
- Non-specific chromosomal aberrations are a significantly prevailing condition in the cells of alcoholics, concluded Denes de Torok of Carnegie-Mellon University.
- Observed strain differences in alcohol consumption in mice may well underly the alcohol dehydrogenase and aldehyde dehydrogenase enzyme systems, suggested David R. Rogers of the Cleveland (Ohio) Clinic Foundation.
- Other papers were presented by David Lester of the Rutgers Center for Alcohol Studies and Earl X. Freed of the Alcohol Research Laboratory of the Lyons (N.J.) VA Hospital; M. E. Hillbom of the Research Laboratories of the State Alcohol Monopoly of Helsinki; Alfred J. Kahn of the Hines (Illinois) VA Hospital, and Frank A. Seixas, Medical Director of NCA.

International experts meet in Helsinki. Shown (left to right) are: Olof A. Forsander, Ph.D., Research Laboratories of the State Alcohol Monopoly of Finland; Jack H. Mendelson, M.D., Department of Psychiatry, Boston City Hospital; Jorge Maridones, Director of the Department of Pharmacology, University of Chile; and Leonard Goldberg, of the Department of Alcohol Research of the Karolinska Institute, Stockholm.

Recovery Time for Alcoholics After Prolonged Intoxication

How long does it take for an alcoholic to recover after prolonged intoxication? A longitudinal study of recovery time for withdrawal conducted by Richard P. Allen, Louis A. Faillage, and Althea Wagman of the Department of Psychiatry, Baltimore City Hospitals and the Johns Hopkins University School of Medicine indicated that for five alcoholic subjects memory functioning was markedly impaired after withdrawal and required two weeks for recovery. For three subjects, sleep as determined by EEG recordings also showed marked changes requiring two weeks for recovery. The data were interpreted as recommending that alcoholics be kept under close medical supervision for 7 to 14 days after withdrawal. (The Johns Hopkins Medical Journal, Vol. 128, March 1971, No. 3, pp. 158-164).

24-Hour Sleep Calms Alcoholic

A 24-hour sleep, induced by chloral hydrate, may be the best initial management technique for an acutely intoxicated alcoholic, says Dr. Percy E. Ryberg, director of the alcoholism program at the Bronx-Lebanon Hospital Center in New York. The sleep treatment restores the patient and keeps him from looking for another drink to calm his nerves. After the patient has been hospitalized for 24 to 36 hours, withdrawal symptoms can become severe and should be treated promptly with medication. (International Medicine & Diagnosis News, September 1, 1971, p. 3)
International Symposium Compares Traffic Safety Countermeasures

“...No one who has responsibility for road safety in any country can be anything but profoundly moved by the appalling tale of suffering which lies behind the statistics of road accidents... Anybody whose concentration and judgement is impaired by alcohol, or any other drug, is a hazard,” asserted the Rt. Hon. John Peyton, M.P., Minister for Transport Industries (U.K.) in welcoming the participants to the International Symposium on Countermeasures to Driver Behaviour under the Influence of Alcohol and Other Drugs. The conference was arranged by the British Medical Association in London September 22-23, 1971, in conjunction with the Plenary Meeting of the Group of Experts on the Effects of Alcohol and Other Drugs on Driver Behaviour of the Organization for Economic Cooperation and Development.

Countermeasures Against Alcohol-Related Highway Accidents

Three types of people with alcohol-related highway offenses are: social drinkers, drinkers in the prodromal stage of alcoholism, and those for whom alcoholism is currently a major problem, said Dr. Frank A. Seixas, Medical Director of the National Council on Alcoholism. Among the various techniques used to distinguish the types are pre-trial investigation and self-tests, such as the test developed by Dr. Rudolph Mortimer for the D.O.T.

The importance of tolerance in interpreting BAL values in alcoholics was emphasized. Treatment programs should aim for total sobriety, which means that the patient must learn to live without alcohol.

Group methods are effective in helping the patient overcome depedency. It is preferable to have a court counselor in building a bridge to AA than to have the offender directly referred to AA by a court. Other forms of group therapy that have proved useful include role playing, psychodrama, encounter groups, etc. as techniques in helping the patient resolve problems that may antedate alcoholism or that may have arisen during the course of the illness. Disulfiram (Antabuse) is of major ancillary value.

The apprehension of the alcohol-using highway offender, said Dr. Seixas, is only the beginning of his rehabilitation.

Ignition Interlock System Prevents Drunken Driver from Starting Car

An ignition interlock system—designed to prevent an intoxicated driver from starting his car—is currently being field-tested by General Motors. The device, called a Phystester TM, was described by Trevor Owen Jones of GM. It is based on a short pre-driving performance test, in which the subject must perform primary and secondary tasks. He must correctly enter a multi-digit number onto a keyboard, interrupting the keyboard sequence to respond to a displayed light appearing at random. Evaluation of performance data and public acceptance is underway.

Road Casualties Decrease in Britain after Road Safety Act

Road casualties in Great Britain dropped sharply after the passage of the Road Safety Act in 1967. The act provided for breath testing on the scene, a maximum legal permissible blood alcohol level of 80 mg./100 m., and compulsory loss of license for 12 months on conviction. R. F. Newby of the Road Research Laboratory reported that in 1968 there were fewer casualties at drinking times and on weekends than at other times, those killed had lower blood alcohol levels, and there was a marked drop in the steadily declining casualty rate. The amount of traffic did not decrease during this period, nor was there a lower consumption of alcohol. There were 179 fewer deaths and 11% fewer injuries. There is some evidence that the effect of the new law (and its associated publicity and enforcement) declined after the first year of operation.

Norwegian Countermeasures

The Norwegian approach emphasizes comparatively strict traffic-alcohol legislation, frequent road blocks, and other police activities, reported Olav Bo of Ulleval Hospital, Oslo. The Road Traffic Act prohibits driving with BAL in excess of 50 mg./100 m. An apprehended driver must consent to medical tests; if he refuses to cooperate, his license will be suspended for at least two years. Legislation presently provides for testing on suspicion, not routinely, but this point is under revision. Road blocks, though costly, are widely used, not only to apprehend drunk drivers but also to check licenses and vehicle safety.

Canadian Research in Alcohol and Highway Safety

A world survey of drinking-driving countermeasures conducted by the Canadian government has showed the lack of valid data pertaining to the effect of the various countermeasures. Road-side surveys are recommended as a technique, and comparable data collection techniques would facilitate evaluation of the effectiveness of various countermeasures.

Two countermeasures on the surface seem to have the greatest potential impact, said Carl M. Stroh, of the Road and Motor Vehicle Traffic Safety of the Canadian Ministry of Transport. The first is a device which will prevent an impaired driver from starting his car. The second involves updating parts of existing countermeasure programs, specifically, increased police surveillance, stiffer penalties, and realistic laws.

Other Reports

- The severity of the sentence does not prevent recidivism in drunken drivers, according to a study of 1674 subjects, conducted by W. Buikhuizen of the Criminological Institute, Gronningen State University. One third of the sample were recidivists.
- The Michigan Alcoholism Screening Test (MAST), reports Dr. Melvin Selzer et al, revealed that 21% of a group of 836 problem drivers scored in an alcoholic or probably alcoholic range. A quarter of the problem drinkers had at least one alcohol-related conviction, and the MAST scores for this group showed 60% to be alcoholic or probably alcoholic.
- In a pilot study, blood alcohol concentration levels are being measured in every victim of a road traffic accident in Rotterdam, reports Dr. J. H. Aarts, Medical Adviser of the Institute for Road Safety Research.
- Legislation permitting wider sale of alcohol in Finland and an increase in the number of motor vehicles, especially driven by young people, resulted in a higher number of cases of drunken driving, said A. Alha, M.D. of the Department of Forensic Medicine, Helsinki.
- In Denmark, reported T. E. Neass Schmidt of the Institute of Forensic Medicine, 671 autopsies of road traffic fatalities, and tests of 651 other people involved in fatal accidents, conducted over 2½ years, revealed that 38% had positive tests for alcohol, with the concentrations twice as high in fatalities as in survivors.
- Computers are being used in Finland to assess the adequacy of clinical tests for intoxication (there are no statutory blood alcohol limits), reported A. Penttila and M. Tenhu, Department of Forensic Medicine, University of Helsinki.
- Psychological tests are being used to select problem drinkers, even when they are sober, said Heinrich Wotawa of the Institute of Driving Psychology of Vienna.
- Plans for evaluation of the Community Safety Action Programs in the U.S. are currently being formulated at both the community and federal level, according to Dr. David M. Promise of Dunlap & Associates. The first results are expected early next year.
- Both the general public and official groups (police, attorneys) are uninformed about the legal BAL limits and...
group, the alcoholic was primarily responsible (79.7%). The control-driver was the one primarily responsible in 56% of the accidents. An analysis of the type of prosecution and the type of accident showed the alcoholic far more involved in the more serious offenses (including all three of the fatal accidents.) First driving offenses occurred early in the history of alcoholism, an average of 6 years before first treatment for his problem. 38 patients or 1/3 of the sample had been hospitalized for conditions associated with excessive drinking. Only 2 were encouraged to seek treatment for their alcoholism.

**Factors in Alcoholic Relapse**

Relapse among alcoholic patients is common, usually occurring suddenly without a gradual change of mood or craving. Dr. B. D. Hore, Lecturer in Psychiatry of the University of Manchester, reported relapses in 18 of 24 patients studied for six months. No significant association was found between overall level of anxiety, depression and craving and drinking behavior. In half of the patients relapse episodes appeared to follow some disturbing event in the patients' interpersonal relationships. While regular contact with the doctor did not prevent relapse, in some patients it appeared to shorten the length of the relapse period.

**Causes of Mortality of Alcoholics**

Alcoholism shortens the life span of an individual, and among the causes of death analyzed in 147 cases in Hungary, diseases of the circulatory system ranked highest (34.6%). Suicide accounted for 23.9% of the deaths, while accidents in a drunken state or drunken brawls were third (8.3%). The survey was reported by Dr. Istvan Balint, a psychiatrist with the Hungarian National Council on Alcoholism.

**Alcohol Abuse Found in Drug Addicts**

Alcohol abuse is one of the chief causes of failure in methadone maintenance programs for drug addicts, said Harriet Barr, Donald J. Ottenberg, and Alvin Rosen of Eagleville (Pa.) Hospital. Eagleville accepts twice as many alcoholics as addicts in treatment, the alcoholics being about a generation older than the addicts. As much as 40% of the addicts, but only 2% of the alcoholics reported illegal activities as their major source of support for the two months prior to admission. The first illegal substance used by 86% of the drug addicts studied was alcohol concurrently with the use of illegal drugs 2/3 of this population used alcohol. The authors conclude: "Alcohol abuse plays an important role in the evolution of heroin addiction in a significant proportion of patients."

**Alcohol and Drug Dependence Programs in Industry**

Public attitudes toward alcoholics have changed in the past 35 years, said Travis E. Dancy, M.D., Senior Psychiatrist of Montreal General Hospital. He cited the growth of AA, the acceptance of the disease concept of alcoholism, and the steadily expanding alcoholic programs in industry. "Constructive coercion" from employers is an important ingredient in continuing sobriety. The industrial physician can play a major role in early recognition of alcoholism. He warned that some alcoholics are using drugs as a substitute for alcohol, since their effects are more difficult to detect.

**Traffic Symposium Reports**

(Continued from page 5)

the complications of driving while under the influence of alcohol, many apparently assuming that they are inviolato. when in fact they are not, concluded R. F. Borkenstein, Director of the Center for Studies of Law in Action, Indiana University. Education is needed to strengthen public support for stricter law enforcement. The public must recognize the magnitude and nature of the risk presented by the drunken driver and not perceive control programs as a personal threat, said Kent B. Jocelyn, University of Indiana.

- Changing driving conditions to reduce the likelihood of accidents will give more benefits than countermeasures aimed against the driver, since individual differences, including intoxication, have less influence on driver performance than on task performance, according to R. J. Grieb of the Institute for Road Safety Research of the Netherlands.

- Statistical information in Canada on blood alcohol concentrations in traffic fatalities are incomplete because of conflicting provincial requirements, reported Arthur F. W. Peart, M.D. of the Traffic Injury Research Foundation. Several research studies are underway to fill in the gaps of knowledge. The interaction between alcohol and meprobamate - a man being investigated by Alice Theiggaard of the Psychiatric Clinic in Copenhagen, including the implications for traffic situations. More research is needed on the effects of drugs on driving ability, said Dr. Klaus Stoering of the Department of Pharmacology, University of Hamburg. Drug metabolism makes the determination of drugs in blood and urine extremely difficult compared to BAL estimations.